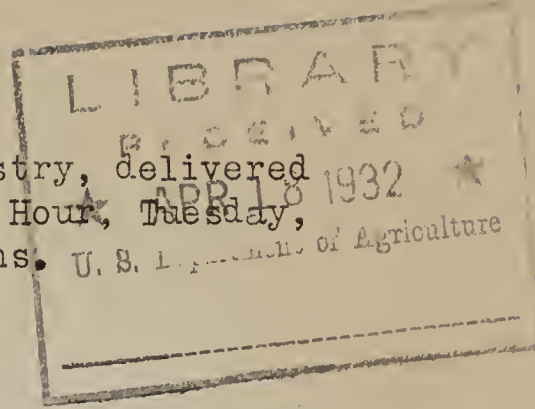


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69Ra A radio talk by W. R. Beattie, Bureau of Plant Industry, delivered in the Department of Agriculture period, National Farm and Home Hour, Tuesday, March 22, 1932, over a network of 47 associate NBC radio stations. U. S. Department of Agriculture



You folks who are interested in any phase of fruit production have several real problems confronting you at this season of the year. First, there is that matter of finishing the dormant spraying before the buds start. Second, in many cases your fruit trees may need a little extra stimulant in the form of readily available nitrogen. Third, and the most important point that I want to bring to your attention today, is the matter of proper pollination of your fruit blossoms.

As you know certain varieties of fruits are what are called "self sterile" that is they will not set fruit with the pollen from their own blossoms. The flowers are perfect and contain plenty of pollen but they require the introduction of pollen from some other variety to make them set fruit. I well remember the case of an old sweet cherry tree that grew in the yard on the farm where I spent my boyhood days. That old cherry tree never bore enough cherries to feed the birds until my father planted a number of cherry trees of different varieties not a great distance from the old tree. After the young trees began to blossom and the bees to visit the blossoms of the young trees and the old tree to gather nectar, that old tree began to bear good crops. In fact it bore so heavily that its old branches broke under the weight of the cherries, all because it was cross pollinated.

You'll find the same thing with certain important commercial varieties of apples like Staymen, that simply will not set a crop of fruit unless pollinated by some other variety, Grimes Golden, for example. This tendency to self sterility varies with the different varieties and in different sections of the country. In addition the potency of the varieties used as pollinators also varies. This has been well worked out in several of the leading fruit-growing States and your State College and Experiment Station workers can give you the information for your locality.

The pollination of your fruit trees depends on having the proper varieties interplanted, also on your having plenty of bees to carry the pollen from one tree to another. We hear a lot about the industry of the "busy little bee," but I am told on good authority that this reputation of the honeybee for industry is a little overdrawn and that bees will not go any farther to get their supply of nectar and pollen than is absolutely necessary. For that reason the trees that are to furnish the pollen must be well distributed throughout your orchard, in fact every third or fourth row of trees should be pollinators. Even with the pollinator trees that close together the trees nearest the pollinators may bear the best crops. Not only should the pollinator trees be well distributed but plenty of bees should be provided in all parts of the orchard. Usually one strong colony to the acre is sufficient.

Did you ever go out into the orchard on a bright, warm day when the trees were in full bloom and listen to the bees buzzing around among the blossoms? Watch them visit first one flower then another, diving down into the flower for the nectar and getting their rough coats covered with pollen, then on to another flower leaving some of the pollen on every flower they visit, finally with a full

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load of nectar they dart off in the direction of the hive.

Many fruit growers have turned bee keepers in order to have plenty of bees to distribute the pollen to their fruit blossoms. Other fruit growers simply rent colonies of bees for the blossoming season from some regular bee keeper. Others purchase package bees from bee keepers in the Southern States and place these bees in hives in their orchards.

If you have a home orchard containing a variety of fruits and several kinds of each you will have no need to worry about having trees that will cross pollinate the others, and the wild bees or your neighbors bees will usually take care of the work for you. But if you have only one cherry tree, especially if it is a sweet cherry, or if you have but one apple tree and no other cherry or apple trees growing nearby you will need to provide a supply of pollen.

Here is the way you can do it. Go to some neighbor or fruit grower who has trees of other varieties of the same kind of fruit and get a large bouquet of blooming branches. Divide the blossoms into three or four smaller bouquets, place their stems in pails or jars of water to keep them fresh and hang them in your tree that you want to pollinate. If your tree is being visited by bees they will transfer the pollen from the blossoms of the bouquets to the blossoms on your tree. Cold, rainy weather at blooming time will interfere with the work of the bees but if you have one or two bright, warm days at the height of the blooming period you will be reasonably sure of a set of fruit.

Don't forget that broadcasting about three pounds of nitrate of soda or sulphate of ammonia under each bearing tree two or three weeks before the blossoms open will also help to secure a full set of fruit.

Another important point for you to remember is that if you want to grow good fruit for home use or for the market you must spray or dust for the control of insects. Give your apple trees their first spraying or dusting for the control of the codling moth just at the time that the last of the petals fall and before the calyx points close over the blossom cavity of the little fruit. If you wait too long the cavity will be closed and you will not be able to get the poison material, lead arsenate or some other poison, down into the cup where the little worm of the codling moth usually eats its way into the apple.

When I think of all the things we have to do in order to produce good fruit I sometimes wonder if it really pays us to attempt to grow fruit for home use, then when I think about how nice it is to have our own fruit and how much we enjoy it, I buckle right down again to the pruning, fertilizing, and spraying with a determination to win.